**Overview**

**Product name**: Anti-LOX 1 antibody [23C11] (FITC)

**Description**: Mouse monoclonal [23C11] to LOX 1 (FITC)

**Host species**: Mouse

**Conjugation**: FITC. Ex: 493nm, Em: 528nm

**Specificity**: ab81710 reacts with LOX 1.

**Tested applications**: Suitable for: Flow Cyt, Functional Studies, ICC/IF

**Species reactivity**: Reacts with: Mouse, Human

**Immunogen**: Fusion protein of extracellular domain (aa 71-273) of human LOX-1 with murine Fc gamma1 (LOX-1-muFc) produced in PEAK cells

**Positive control**: Human APCs

**General notes**: ab81710 neutralizes the biological activity of LOX 1. It also inhibits Hsp70 binding to dendritic cells and Hsp70 induced antigen cross representation. In vivo, targeting LOX1 with a tumour antigen using anti LOX 1 antibody ab81710 induces anti tumour immunity.

**Properties**

**Form**: Liquid

**Storage instructions**: Shipped at 4°C. Store at +4°C.

**Storage buffer**: Preservative: 0.02% Sodium azide
Constituents: PBS, 1% BSA

**Purification notes**: Purified, 0.2 µm filtered solution.

**Primary antibody notes**: ab81710 neutralizes the biological activity of LOX 1. It also inhibits Hsp70 binding to dendritic cells and Hsp70 induced antigen cross representation. In vivo, targeting LOX1 with a tumour antigen using anti LOX 1 antibody ab81710 induces anti tumour immunity.

**Clonality**: Monoclonal

**Clone number**: 23C11

**Isotype**: IgG1
Function
Receptor that mediates the recognition, internalization and degradation of oxidatively modified low density lipoprotein (oxLDL) by vascular endothelial cells. OxLDL is a marker of atherosclerosis that induces vascular endothelial cell activation and dysfunction, resulting in pro-inflammatory responses, pro-oxidative conditions and apoptosis. Its association with oxLDL induces the activation of NF-kappa-B through an increased production of intracellular reactive oxygen and a variety of pro-atherogenic cellular responses including a reduction of nitric oxide (NO) release, monocyte adhesion and apoptosis. In addition to binding oxLDL, it acts as a receptor for the HSP70 protein involved in antigen cross-presentation to naive T-cells in dendritic cells, thereby participating in cell-mediated antigen cross-presentation. Also involved in inflammatory process, by acting as a leukocyte-adhesion molecule at the vascular interface in endotoxin-induced inflammation. Also acts as a receptor for advanced glycation end (AGE) products, activated platelets, monocytes, apoptotic cells and both Gram-negative and Gram-positive bacteria.

Tissue specificity
Expressed at high level in endothelial cells and vascular-rich organs such as placenta, lung, liver and brain, aortic intima, bone marrow, spinal cord and substantia nigra. Also expressed at the surface of dendritic cells. Widely expressed at intermediate and low level.

Involvement in disease
Note=Independent association genetic studies have implicated OLR1 gene variants in myocardial infarction susceptibility.
Note=OLR1 may be involved in Alzheimer disease (AD). Involvement in AD is however unclear: according to some authors (PubMed:12354387, PubMed:12810610 and PubMed:15976314), variations in OLR1 modify the risk of AD, while according to other (PubMed:15000751 and PubMed:15060104) they do not.

Sequence similarities
Contains 1 C-type lectin domain.

Domain
The cytoplasmic region is required for subcellular sorting on the cell surface. The C-type lectin domain mediates the recognition and binding of oxLDL.

Post-translational modifications
The intrachain disulfide-bonds prevent N-glycosylation at some sites. N-glycosylated.

Cellular localization
Cell membrane. Secreted. A secreted form also exists.

Applications
Our Abpromise guarantee covers the use of ab81710 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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| Flow Cyt          | Use 5µl for 10^6 cells.  
*ab91356* - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |                                                                                                                                          |
| Functional Studies| Use at an assay dependent concentration. Antibody totally prevented Hsp70 binding to LOX-1-CHO but not mock-transfected CHO cells |                                                                                                                                          |
| ICC/IF            | Use at an assay dependent concentration.                                   |                                                                                                                                          |

Target

Target

Receptor that mediates the recognition, internalization and degradation of oxidatively modified low density lipoprotein (oxLDL) by vascular endothelial cells. OxLDL is a marker of atherosclerosis that induces vascular endothelial cell activation and dysfunction, resulting in pro-inflammatory responses, pro-oxidative conditions and apoptosis. Its association with oxLDL induces the activation of NF-kappa-B through an increased production of intracellular reactive oxygen and a variety of pro-atherogenic cellular responses including a reduction of nitric oxide (NO) release, monocyte adhesion and apoptosis. In addition to binding oxLDL, it acts as a receptor for the HSP70 protein involved in antigen cross-presentation to naive T-cells in dendritic cells, thereby participating in cell-mediated antigen cross-presentation. Also involved in inflammatory process, by acting as a leukocyte-adhesion molecule at the vascular interface in endotoxin-induced inflammation. Also acts as a receptor for advanced glycation end (AGE) products, activated platelets, monocytes, apoptotic cells and both Gram-negative and Gram-positive bacteria.

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Overlay histogram showing A549 cells stained with ab81710 (red line). The cells were fixed with 80% methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab81710, 0.5µg/1x10^6 cells) for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 FITC (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.

Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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